



STRATHMORE BUSINESS SCHOOL
BACHELOR OF FINANCIAL SERVICES
END OF SEMESTER EXAMINATION
BFS 1201: MONETARY AND FINANCIAL SYSTEMS

DATE: Friday, 14th March 2025

TIME: 13:30-15:30

Instructions

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

QUESTION ONE

30 MARKS

- a) The following table provides data from the CBK annual report for FY 2020/2021 and FY 2021/2022:

Variable	2020/2021 (Ksh Billion)	2021/2022 (Ksh Billion)
Currency in circulation	250	230
Total checkable/demand deposits	1500	1800
Required Reserves	67.5	75
Excess reserves	18	15

Given Cash Reserve Ratios (CRR): 4.5% for FY 2020/2021 and 4.2% for FY 2021/2022.

Required:

- i. Calculate the value of the currency deposit ratio (c) for both years. **(2 marks)**
 - ii. Calculate the value of the excess reserve ratio (e) for both years. **(2 marks)**
 - iii. Given the Cash Reserve Ratios, calculate the value of the money multiplier (m) for both years and interpret. **(3 marks)**
- b) Money can be defined as anything that is generally accepted as payment for goods and services or in the repayment of debts, and is distinct from income and wealth. Discuss three primary functions of money. **(6 marks)**
- c) Financial innovation may lead to major changes in the financial systems and contribute to financial institutions potentially making profits. The innovations are stimulated by

drastic changes in the financial and economic environment. Discuss **three** types of financial innovation. **(6 marks)**

- d) Standard Bank receives new demand deposits of 12,000,000 in addition to the existing deposits of 8,000,000. Additionally, the bank holds 700,000 as cash in till and 1,200,000 as deposits with the Central Bank that are not yet invested. The current Cash Reserve Ratio (CRR) is 5.0%.

Required:

- i. Compute the required reserves of the bank. **(1 mark)**
 - ii. Compute the excess reserves of the bank. **(2 marks)**
- e) Central banks undertake policies to control the money supply in an economy and the channels by which money is supplied. Discuss **four** main goals of central banks in their conduct of monetary policy. **(8 marks)**

QUESTION TWO **20 MARKS**

- a) To influence the money supply within the economy, the Central Bank of Kenya employs various monetary policy tools. Explain how the Central Bank uses reserve requirements, open market operations and the Central bank rate to conduct monetary policy. **(9 marks)**
- b) Inflation targeting is a commitment of the central bank to price stability as the primary, long-run goal of monetary policy. Discuss **two** advantages and two disadvantages of having an inflation target. **(4 marks)**
- c) Monetary policy actions, especially changes in interest rates, take time to influence the economy. As a result, policymakers often focus on expected future conditions rather than the present state of the economy. In this context, assume that the monetary policy committee employs Taylor's rule to determine the Central Bank Rate (CBR). If the equilibrium real CBR is 4.5%, the positive output gap is 4%, the target inflation rate is 3%, and the actual inflation rate is 5%, what should be the Central Bank Rate target? **(3 marks)**
- d) Differentiate between:
- i. Frictional and structural unemployment **(2 marks)**
 - ii. IS curve and Monetary policy curve (MP) **(2 marks)**

QUESTION THREE **20 MARKS**

- a) Over time, payment systems have evolved significantly to improve efficiency, convenience, and security in financial transactions. Discuss key milestones in the evolution of payment systems. **(10 marks)**
- b) You are provided with the following data for the FY 2021/22 and FY 2022/23 of an economy showing various components:

Component	Amount 2021/2022	(Billions)	Amount 2022/2023	(Billions)
Public debt	350		420	
Demand deposits	1200		1450	
Tax revenues	650		870	

Currency in circulation	275	480
Imports	520	690
Residents foreign currency deposits	580	660
Time deposits	400	620
Exports	730	980
Savings deposits	520	750

Required:

Compute the M0, M1, M2, and M3 aggregates for the two years. **(4 marks)**

Discuss the three motives for holding money according to Keynes in his liquidity preference theory of the demand for real money balances. **(6 marks)**

QUESTION FOUR 20 MARKS

- a) Twaweza Bank has 200 million in total assets and 20 million in equity, while Imara Bank has 150 million in total assets and 10 million in equity.

Required:

- i. Compute the equity multipliers for both banks. **(2 marks)**
 - ii. Compute the Return on Equity (ROE) for both banks, assuming that the Return on Assets (ROA) for both banks is 1.5%. **(2 marks)**
 - iii. Based on your results, which bank would you prefer to invest in and why? **(1 mark)**
- b) Suppose that you are the bank manager of Equity Bank. The bank has suffered a deposit outflow that has led to a violation of the required reserves requirement by the central bank. Discuss **three** options you would consider exploring and the cost associated with each of these options. **(6 marks)**
- c) Describe the composition of a bank's balance sheet, providing examples of each key component. **(6 marks)**
- d) Capital adequacy management is one of the key principles of bank management. Discuss the importance of bank capital. **(3 marks)**

QUESTION FIVE 20 MARKS

- a) You are provided with data below for money supply (M) and the annual nominal Gross Domestic Product (PY) for an economy for four years: P is the price level and Y is aggregate output (income).

Indicator	2018	2019	2020	2021
Money Supply (M)	250	270	290	310
	Billion	Billion	Billion	Billion
Nominal GDP (PY)	2200	2600	3000	3400
	Billion	Billion	Billion	Billion

Required:

- i. In accordance with the quantity theory of money demand, compute the velocity of money for each year. **(4 marks)**
 - ii. Calculate the nominal GDP for the year 2022, assuming that the velocity remains the same as that of 2021 and the money supply grows by 5%. **(2 marks)**
- b) Discuss **two** main criteria considered by the Central bank while choosing a policy instrument. **(4 marks)**
 - c) Discuss **two** factors that determine money demand according to the portfolio theories of money demand. State whether an increase or decrease in each factor can increase the demand for money. **(4 marks)**
 - d) The IS curve shifts whenever there is a change in some factors. Discuss **three** of these factors and the direction the IS curve takes assuming there is an increase in each of the factors. **(6 marks)**